UNITED NATIONS

Convention to Combat Desertification

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ICCD/COP(2)/CST/1
31 July 1998

ORIGINAL: ENGLISH

CONFERENCE OF THE PARTIES
Committee on Science and Technology
Second session
Dakar, 1-3 December 1998
Item 3 of the provisional agenda

ADOPTION OF THE AGENDA AND ORGANIZATION OF WORK

Provisional agenda and annotations

Note by the Secretariat

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I. PROVISIONAL AGENDA

1. The provisional agenda presented for adoption is as follows:

1. Opening of the session.

2. Election of vice-chairpersons.

3. Adoption of the agenda and organization of work.

4. Benchmarks and indicators.

5. Survey and evaluation of existing networks, institutions, agencies and bodies.

6. Report on the work of other bodies performing work similar to that envisaged for the Committee on Science and Technology.

7. Traditional knowledge.

8. Future work programme of the Committee.

9. Roster of independent experts.

10. Creation, if necessary, of an ad hoc panel or panels.

11. Other matters.

12. Report of the session.

II. ANNOTATIONS TO THE PROVISIONAL AGENDA

Introduction

2. In accordance with paragraph 7 of the terms of reference of the Committee on Science and Technology (CST) (decision 15/COP.1), "(t)he Committee shall adopt a programme of work, which should include estimates regarding its financial implications. The programme of work shall be subject to approval by the Conference of the Parties."

Venue

3. Article 24, paragraph 1 of the Convention to Combat Desertification (CCD) provides that the Committee on Science and Technology shall meet "in conjunction with the ordinary sessions of the Conference of the Parties." The second session of the CST will therefore meet at Méridien Conference Centre, Dakar, during the second session of the Conference of the Parties. Tentatively, the Committee has been scheduled to meet from 1 to 3 December 1998.

Participants

4. Article 24, paragraph 1 of the CCD provides that the CST "shall be multidisciplinary and open to the participation of all Parties." Consistent with the provisions of article 22, paragraph 7, it is anticipated that sessions of the CST will be open to observers in accordance with the rules of procedure.

Documentation

5. Lists of the documents prepared for the Committee's first and second sessions are contained in annex I. In addition to normal distribution, documents will be made available on the secretariat's World Wide Web site at the following address on the Internet: <http://www.unccd.ch>.

1. Opening of the session

6. In accordance with rule 22 of the rules of procedure of the Conference of the Parties (decision 1/COP.1), the Chairperson of the CST shall be elected by the Conference of the Parties. This will occur at the opening meeting of the COP on 30 November 1998. The second session of the CST will then be opened on 1 December by the Chairperson of the CST.

2. Election of vice-chairpersons

7. In accordance with paragraph 6 of the terms of reference of the CST, the CST shall elect its own Vice-Chairpersons, one of whom shall act as Rapporteur. Paragraph 6 of the terms of reference provides: "The Chairperson and the Vice-Chairpersons shall be elected with due regard to the need to ensure equitable geographical distribution and adequate representation of affected country Parties, particularly those in Africa, and shall not serve for more than two consecutive terms."

3. Adoption of the agenda and programme of work

8. The CST will have before it the above provisional agenda for adoption. It has been prepared taking into consideration comments of Parties during the first session of the CST and submissions received subsequently, in accordance with the decision 16/COP.1. A tentative schedule of work is to be found in annex II.

New recommendations

9. Provision has been made in the CST schedule of the work for the drafting of necessary reports following discussion of the work of the CST during the morning of Thursday 3 December 1998. Any new recommendations could also be dealt with at the plenary of the COP on 4 December 1998.

4. Benchmarks and indicators

10. In accordance with decision 22/COP.1, the ad hoc panel on benchmarks and indicators, established by the Conference of the Parties, met in Beijing from 20 to 22 May 1998. Some of the participants in the informal open-ended process and members of the ad hoc panel are scheduled to meet in Geneva in early September 1998. In accordance with that decision, the panel is to act as a steering committee to the informal open-ended consultative process established by the interim secretariat with decision 9/12 of the Intergovernmental Negotiating Committee on Desertification (INCD) and continued pursuant to decision 10/9 of the INCD. The task of the informal process is to review the methodology for impact indicators contained in document ICCD/COP(1)/3/Add.1, and to determine how the methodology could be carried out and whether it could be recommended for use to the Conference of the Parties. The report of the ad hoc panel contained in document ICCD/COP(2)/CST/3 and Add.1 will be before the Conference of the Parties. The COP will be invited to consider that report, adopt any appropriate recommendation to the COP and consider reappointing the panel.

5. Survey and evaluation of existing networks

11. A note by the secretariat on the arrangements it undertook with the United Nations Environment Programme (UNEP) for the initiation of the work mandated by article 25 of the CCD and decision 23/COP.1 will be before the CST and contained in document ICCD/COP(2)/CST/2. In addition, an interim report by UNEP, on behalf of a consortium of institutions and organizations designated to carry out the first phase of work on the survey and evaluation of existing networks will be before the CST for its review and any direction the CST wishes to recommend to the COP to give to UNEP and consortium members: document ICCD/COP(2)/CST/2/Add.1. The CST will be invited to consider recommending giving direction to UNEP and consortium members, and also to begin its consideration of the methodology to be followed for phases 2 and 3 of this work.

6. Report on work of other bodies performing work similar to that envisaged for the Committee on Science and Technology

12. The COP, by its decision 21/COP.1, requested the secretariat to report to the second session with a consolidated report of information contained in documents A/AC.241/67 and ICCD/COP(1)/CST/4. That report will be before the Conference of the Parties as document ICCD/COP(2)/CST/4 for its consideration. In accordance with the previous decision of the COP, the report is also being made available in electronic version.

7. Traditional knowledge

13. By decision 20/COP.1, the Conference of the Parties requested that the CST allocate a full additional day, with the participation of international, regional, subregional, non-governmental and community-based organizations to allow for a review of the report of the secretariat on traditional knowledge, discussion of the topic and conclusions and recommendations to be reached. The CST will have before it a synthesis prepared by the secretariat based on information submitted by Parties and observers respecting the use of traditional knowledge and technology, knowledge, know-how and practices: document ICCD/COP(2)/CST/5. The secretariat will also submit a report it has prepared based on a survey of such issues in selected countries of the African, Asian and Latin American and Caribbean regions. This latter report, contained in document ICCD/COP(2)/CST/5/Add.1, will not purport to be global or comprehensive in nature, but represents an attempt to identify certain traditional knowledge which could be useable in countries or regions other than those from which the knowledge is drawn.

8. Future work programme of the Committee

14. In accordance with decision 16/COP.1, the secretariat solicited topics for inclusion on the agenda for the second session of the Conference of the Parties. Submissions were received from five Parties. One Party dealt with methodology, and suggested that the secretariat be asked to compile a list of issues to be considered at subsequent sessions of the CST to enhance the ability of Parties to prepare for such sessions. Topics suggested by the Parties making submissions included: development of the methodology for assessment and mapping of desertification for better coordination of all scientific and practical activities; creation, active and effective functioning of regional desertification training centres for capacity-building at the local level to carry out certain practical measures in critical regions; expansion of cooperation on research activities; exchange of information and knowledge on scientific results and practical measures; rainwater harvesting schemes - technical, economic and social issues; afforestation and reforestation schemes - technical and community incentives; drought preparedness measures - national and local.

15. Topics suggested also included: examination of the possibilities of cooperation between the Framework Convention on Climate Change (capacity-building, collection and exchange of information); examination of the interface between local and traditional knowledge and modern techniques in the struggle against desertification; partnership as a method of combating desertification (regional and/or international framework cooperation); transfer of technology for the protection of ecosystems degraded by desertification, retention and use of water, with particular reference to: (i) technology for the collection, retention and use of water, (ii) use of alternative sources of energy, (iii) management of degraded ecosystems in hydrographic basins.

16. It was also suggested that topics could include: water and wind erosion in arid lands (type of materials and techniques used, cost, efficiency, possibility of application in other regions); creation of a uniform geo-information system on grasslands (GIS); creation of methods and criteria of ecological assessments of the desertification processes; creation of a uniform system of early drought warning in selected regions; publication of a manual on technologies of fertility renewal of degraded land.

17. The CST may wish to group these topics in two categories, institutional and substantive, in considering its future work programme and devote time to both clusters of issues to be selected in advance, to allow Parties to prepare for sessions devoted to specific items.

18. The CST may wish to consider what recommendation to give to the COP with respect to the future work programme of the CST, and may also wish to make recommendations to enhance the effectiveness of the CST in carrying out its responsibilities outlined in its terms of reference during the inter-sessional period.

9. Roster of independent experts

19. Under the provisions of article 24, paragraph 2 of the Convention, the COP is to establish and maintain a roster of independent experts with expertise and experience in the relevant fields. Consistent with decision 18/COP.1, the secretariat has maintained the roster, and its updated form is contained in document ICCD/COP(2)/10. The CST may wish to review the roster, and make recommendations to the COP respecting the composition of the roster and respecting any guidance the COP may wish to give to the secretariat as to the appropriate format for it.

10. Creation, if necessary, of an ad hoc panel or panels

20. Under the provisions of article 24, paragraph 3 of the Convention, the COP may, as necessary, appoint ad hoc panels to provide it, through the CST, with information and advice on specific issues regarding the state of the art in relevant fields of science and technology. The CST may wish to consider recommending to the COP the establishment of any ad hoc panels which may be required, including the reappointment of the panel on benchmarks and indicators the COP established at its first session.

11. Other matters

21. The CST may wish to consider recommending to the COP whether and how any other inter-sessional work in the domain of science and technology should be undertaken.

12. Report of the session

22. A draft report on the session will be prepared for adoption at the final session. The CST is invited to complete the final report after the session, with the assistance of the secretariat and under the guidance of the Chairperson.

Annex I

LIST OF DOCUMENTS PREPARED FOR THE FIRST AND SECOND SESSIONS OF THE COMMITTEE ON SCIENCE AND TECHNOLOGY

Second session

ICCD/COP(2)/CST/1	Adoption of the agenda and organization of work
ICCD/COP(2)/CST/2	Survey and evaluation of existing networks, institutions, agencies and bodies
ICCD/COP(2)/CST/2/Add.1	Supplementary report on survey and evaluation of existing networks
ICCD/COP(2)CST/3	Benchmarks and indicators
ICCD/COP(2)/CST/3/Add.1	Supplementary report on work on benchmarks and indicators: report of ad hoc panel
ICCD/COP(2)/CST/4	Report on the work of other bodies performing work similar to that envisaged for the CST
ICCD/COP(2)/CST/5	Traditional knowledge
ICCD/COP(2)/CST/5/Add.1	Supplementary report on traditional knowledge

First session

ICCD/COP(1)/CST/1	Adoption of agenda and organization of work of the CST
ICCD/COP(1)/CST/2	Survey and evaluation of existing networks
ICCD/COP(1)/CST/2/Add.1	Supplementary report on survey and evaluation of existing networks
ICCD/COP(1)/CST/3	Report on work on benchmarks and indicators
ICCD/COP(1)/CST/3/Add.1	Supplementary report on work on benchmarks and indicators
ICCD/COP(1)/CST/4	Report on work of other bodies performing work similar to that envisaged for the CST
ICCD/COP(1)/CST/5	Reports on modalities and timing of future work on inventories of research and traditional knowledge; establishment of research priorities

Annex II

TENTATIVE SCHEDULE OF WORK FOR THE SECOND SESSION
OF THE COMMITTEE ON SCIENCE AND TECHNOLOGY

Tuesday 1 December 1998		
	9.30 a.m. - 12.30 p.m.	**3 p.m. - 6 p.m.**
CST	Organization of work (ICCD/COP(2)/CST/1) - Review of outstanding items - Establishment of roster of experts (ICCD/COP(2)/11) - Survey and evaluation (ICCD/COP(2)/CST/2 and Add.1)	- Benchmarks and indicators (ICCD/COP(2)/CST/3 and Add.1) - Bodies doing work of relevance to CST (ICCD/COP(2)/CST/4)
Wednesday 2 December 1998		
	9.30 a.m. - 12.30 p.m.	**3 p.m. - 6 p.m.**
CST	- Traditional knowledge (ICCD/COP(2)/CST/5 and Add.1)	- Traditional knowledge (ICCD/COP(2)/CST/5 and Add.1)
Thursday 3 December 1998		
	9.30 a.m. - 12.30 p.m.	**3 p.m. - 6 p.m.**
CST	- Programme of work for CST - Drafting of recommendations to COP	- Adoption of recommendations to COP
Friday 4 December 1998		
	9.30 a.m. - 12.30 p.m.	**3 p.m. - 6 p.m.**
PLENARY	- Report of CST	

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Item 5 of the provisional agenda

SURVEY AND EVALUATION OF EXISTING NETWORKS, INSTITUTIONS, AGENCIES AND BODIES

Note by the secretariat

1. By its decision 23/COP.1, on the recommendation of the Committee on Science and Technology (CST), the Conference of the Parties (COP) approved the proposal contained in ICCD/COP(1)/CST/2/Add.1 submitted by the United Nations Environment Programme (UNEP) on behalf of itself and a consortium of members, for the work on the survey and evaluation of existing networks, institutions, agencies and bodies.

2. In the same decision, the COP adopted terms of reference for the work and requested the head of the secretariat to enter into any necessary contractual arrangements on behalf of the Conference of the Parties for completion of the work within the framework of the terms of reference.

3. The COP also requested UNEP to include the participation of any other organization qualified and able to contribute to the work contemplated in the proposal, provided that such organization indicated its interest to UNEP no later than 15 December 1997.

4. The interim report of UNEP on progress on this work is before the COP in document ICCD/COP(2)/CST/2/Add.1.

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BENCHMARKS AND INDICATORS

Note by the secretariat

I. INTRODUCTION

1. By its decision 22/COP.1, the Conference of the Parties (COP) requested the Parties and observers to provide comments to the secretariat on the proposed methodology for impact indicators contained in document ICCD/COP(1)/CST/3/Add.1. A synthesis of those comments is to be found in section II below.

2. By the same decision and in accordance with article 24, paragraph 3 of the Convention, the COP appointed an ad hoc panel to act as a steering committee to the open-ended informal consultative process on benchmarks and indicators previously initiated by the Intergovernmental Negotiating Committee on Desertification (INCD).

3. At the same time, the COP requested the secretariat to continue, in consultation with the ad hoc panel, such informal process for the purpose of reviewing the methodology for impact indicators contained in ICCD/COP(1)/CST/3/Add.1, and for the purpose of determining how the methodology could be carried out and whether it could be recommended for use to the Conference of the Parties.

II. CONTRIBUTIONS OF PARTIES AND OBSERVERS

4. The secretariat has received written contributions on the methodology for impact indicators contained in ICCD/COP(1)/CST/3/Add.1 from three Parties and two observers. The observations and suggestions concerned the methodology proposed in that document and ongoing experience in the field of benchmarks and indicators. There may be contradictions and overlaps, as is often the case when a collection of viewpoints is summarized. The written contributions may be summarized as follows:

(a) The methodology proposed at this stage covers all the questions that should be taken into account in the selection of an indicator or of its replacements;

(b) A dynamic and practical methodology needs to be designed which can be adapted to the varied circumstances of the regions;

(c) The use of implementation indicators alone might prove incomplete and lead to the unnecessary consumption of resources in the reports of the Parties. It is necessary to develop impact indicators as soon as possible;

(d) The approach of the proposed methodology will require human and material resources for its development; the ad hoc panel on benchmarks and indicators should develop a model by subregion, to serve as a reference tool for developing the systems for follow-up and evaluation of implementation of the Convention at different levels, bearing in mind the bottom-up approach;

(e) It must be ensured that the conditions for implementing the proposed methodology take existing structures into account and provide for the functioning of existing procedures;

(f) In the development of this methodology, it is useful to take existing ongoing work on indicators into account as well as experience acquired in other sectors such as forestry and biodiversity;

(g) Each indicator or each question should have baseline data which can be used as a starting point for evaluating future trends.

III. CONCLUSIONS OF THE AD HOC PANEL

5. The conclusions of the ad hoc panel on benchmarks and indicators are before the CST and the COP in document ICCD/COP(2)/CST/3/Add.1.

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BENCHMARKS AND INDICATORS

REPORT OF THE AD HOC PANEL

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PART A. BACKGROUND

1. In accordance with decision 22/COP.1 (ICCD/COP(1)/11/Add.1) of the first session of the Conference of the Parties, the Ad Hoc Panel on Benchmarks and Indicators was convened in Beijing, China from 20-22 May 1998. The Ad Hoc Panel was subsequently convened with the involvement of participants in the informal process referred to in that decision in Geneva from 1-3 September 1998. Both meetings were chaired by Professor Ju Hongbo of China.

2. The members of the Ad Hoc Panel and the participants in the informal process present at the Geneva meeting are listed in annex I.

3. In its decision 22/COP.1, the Conference of the Parties recalled the informal process initiated by the secretariat in accordance with decision 9/12 of the Intergovernmental Negotiating Committee on Desertification (INCD) and continued pursuant to INCD decision 10/9 which brought together international, regional and subregional organizations, non-governmental organizations and interested INCD members for the examination of benchmarks and indicators relevant to the Convention.

4. At its first session, the Conference of the Parties appointed the Ad Hoc Panel to act as a steering committee to oversee the continuation of the informal process and requested the interim secretariat in consultation with the Ad Hoc Panel to continue the informal process for the purpose of:

(a) Reviewing the methodology for impact indicators contained in ICCD/COP(1)/CST/3/Add.1; and

(b) Determining how the methodology could be carried out and whether it could be recommended for use by the Conference of the Parties.

PART B. REVIEW OF METHODOLOGY CONTAINED IN ICCD/COP(1)/CST/3/ADD.1

5. At its Beijing and Geneva meetings, the Ad Hoc Panel reviewed the methodology contained in ICCD/COP(1)/CST/3/Add.1 and recommends that consideration be given to the integration of the following general elements arising from Beijing meeting:

(a) Emphasis on indicators which would provide information on the cost of desertification and the effects of drought;

(b) Emphasis on indicators which would provide information on economic and social benefits to the populations of affected areas of successfully combating desertification and mitigating the effects of drought;

(c) Emphasis on indicators related to gender issues;

(d) Emphasis to be placed on developing indicators capable of predicting the impact of future environmental and natural changes;

(e) Emphasis to be placed on the importance of capacity-building in development of indicators;

(f) Inclusion of thresholds, ranges and limits in the development of indicators;

and the following additional specific elements arising from the Geneva meeting:

(g) Given the lack of capacities of some countries to undertake the inventories referred to in paragraph 10 of document ICCD/COP(1)/CST/3/Add.1, support should be sought from partners;

(h) Actors referred to in paragraph 11 (b)(i) of that document should include decision-makers. At the local level, actors may come from any sectors affected by desertification;

(i) In the context of paragraph 11 (b)(ii) of that document, scientific and technical capacities should be sought from all relevant sources, including research organizations, to provide support at all levels;

(j) In the context of applying paragraph 13 of that document, advantage should be taken of existing reliable data including those developed in the context of other Conventions and by other relevant organizations with a view to achieving synergies, minimizing costs, reducing the time to collect the data, and preventing duplication of effort;

(k) Comparability referred to in paragraph 14 of that document should be ensured across subregions as well;

(l) Results and indicators referred to in paragraph 14 (e) of that document could be presented in maps and other forms;

(m) The purpose of whatever process is applied to the indicators after their production in the context of paragraph 14 (f) would be to allow decision-makers to achieve the overall objectives for which these indicators have been produced;

(n) The overall principle to be applied in the context of paragraph 19 of that document should be the partnership/consultative approaches contained in the Convention, involving all actors, and in applying this principle, a variety of methods and systems can be employed.

PART C. IMPLEMENTATION OF METHODOLOGY CONTAINED IN ICCD/COP(1)/CST/3/ADD.1

6. Periodically the indicators of the monitoring systems should be updated in order to incorporate new variables or new approaches allowing for a better monitoring capacity, while at the same time maintaining the ability to look at long-term trends and ensuring continuity between existing and new indicators. Gathering new information or suggestions makes possible continuous improvement of the system to adapt it better to changes or new conditions created by desertification dynamics. This justifies the creation of a process of continuous consultation involving various actors, ranging from land users at a local level to decision-makers acting at all levels.

7. These actors will provide information seen from various perspectives and scales. The pragmatic vision of the local population may be contrasted with the long-term vision of planners, and the global vision of those having the responsibility for sub-national and national development. Each group of actors will provide and receive available information to form a realistic and comprehensive perception of problems created by desertification. Consultation at any level will require emphasis to be placed on the bottom-up approach, and a recognition of the need for flows of information in both directions between (a) the land user and those directly affected by desertification, and (b) the relevant institutions and agencies.

8. An operational system of consultation is likely to include the following components:

(a) A comprehensive and participative analysis of what kind(s) of information are required by which actors and for what purpose;

(b) An analysis of what information or information-generating capacity currently exists;

(c) The identification of, and a process for getting agreement on, the indicators upon which the system should be based;

(d) The prioritization of needs for information and the related infrastructure required for the gathering of such information;

(e) Capacity-building at all levels;

(f) A clear articulation of the institution(s) responsible for establishing, maintaining and running the monitoring system at all levels;

(g) A process of overall self-evaluation at the national and sub-national levels of the effectiveness of monitoring systems.

9. Such a system of consultation would benefit from the articulation of several elements (listed below not necessarily in sequential order) to implement the process, such as:

Element 1: Establishing a procedure to collect information

10. Considering the various types of information to be provided by the different groups of actors, distinct surveys should be prepared: a) the local population will be required to give information about their perception of changes in the environment and natural resources, the immediate consequences of these changes on land productivity, and how they are dealing with these problems; b) local authorities should prioritize any problems related to these changes and the corresponding indicators from the point of view of managers of local policies; c) sub-national and national authorities are encouraged to answer questions as to how they are addressing the problems and their consequences (indicators and policies); d) the scientific community is invited to participate in the process of developing indicators best suited for understanding phenomena and the most significant for predicting long-term changes; and e) information could be solicited from other relevant institutions and individuals.

Element 2: Developing the process of consultation and selecting a set of global indicators

11. To start the process, consultations should first be undertaken. Resulting information will serve as working material to be analysed in national workshops, involving relevant expertise, e.g. from government ministries and agencies, institutions, non-governmental and community-based organizations, independent experts and other relevant actors. All parties and regions are encouraged to undertake processes at the national and regional levels in the near future to develop sets of indicators, their associated formats, scales and sources of information. A similar process at the international level should then be established to develop a global set of indicators. Information generated by this process at the international level (selected indicators, sources of information in each region, formats, scales, collecting procedures, participating institutions) could be submitted for compilation by the secretariat of the CCD, once authorized by the COP. Parties are invited to maintain periodic consultation with a view to updating information derived from the processes outlined in elements 1 and 3.

Element 3: Promoting a mechanism to evaluate applicability of indicators

12. National authorities are invited to establish a relevant mechanism to conduct a periodic evaluation of the applicability of current indicators and monitoring systems, and suggest improvements to them if necessary. A similar periodic evaluation should also be carried out at the regional level bearing in mind the national nature of the process of application of the indicators.

Element 4: Promoting institutional and technical capacities

13. Parties are invited to promote institutional and technical capacities to compile, organize, analyse critically and form conclusions from information derived from the system of indicators. Parties are also invited to designate an institution to take the responsibility for this task in collaboration with several others, in order to: a) form a national consultative mechanism on desertification indicators; b) have the task of managing the national Desertification Monitoring System (DMS); c) lead the process of capacity building; and d) facilitate technology transfer.

Element 5: Maintaining the consultative process

14. Each party shall insure: a) the articulation of institutional capacities within each country; b) the establishment of the technological capacity to implement and manage the DMS, including processing of information from periodic consultation; c) the efficient use of existing resources so as to minimize cost and efforts; d) the creation of a board of collaborating institutions from each country; and e) the submission of periodic information as part of national reporting to the CCD secretariat and through existing channels.

PART D. RECOMMENDATIONS TO THE CONFERENCE OF THE PARTIES

15. The Ad Hoc Panel recommends to the Conference of the Parties:

a) To adopt the methodological framework for impact indicators outlined in ICCD/COP(1)/CST/3/Add.1, taking into account the results of the Beijing and Geneva meetings as summarized in Part B;

(b) To adopt the implementation process contained in Part C;

(c) To apply the framework and the implementation process which should be undertaken at all levels, sub-national, national, subregional, regional, and global;

(d) To mobilize resources as soon as possible to support the capacities of Governments and relevant organizations to report on the utility of the indicators and the practicality of using them to subsequent sessions of COP, consistent with paragraph 2 of decision 22/COP.1.

16. The Ad Hoc Panel further recommends the undertaking of catalytic activities to test and refine the methodological framework and process of implementation.

PART E. ASSISTANCE IN IMPLEMENTATION

17. The Ad Hoc Panel recommends that developed country Parties, the United Nations and international, regional, and interregional organizations should be invited to assist the affected country Parties in implementing the methodology for the application of the impact indicators to be proposed for adoption by the COP.

PART F. DOCUMENTS

18. Included in the documents submitted for consideration by the Ad Hoc Panel and the informal process were those listed in annex II.

Annex I

MEMBERS OF THE AD HOC PANEL ON BENCHMARKS AND INDICATORS APPOINTED BY THE CONFERENCE OF THE PARTIES

Prof. Ju Hongbo	China
Prof. Hassan Ahmadi	Iran
Prof. Abdelkarim Ben Mohamed	Niger
Prof. Cristobal Félix Diaz Morejón	Cuba
Dr. Abdessalem Kallala	Tunisia
Prof. Tereza Mendizabal	Spain
Dr. Heitor Matallo Junior	Brazil
Dr. Christian Valentin	France

PARTICIPANTS IN THE INFORMAL PROCESS PRESENT AT THE GENEVA MEETING

Mr. Dimbon Bamba	Ministry of Environment and Water, Burkina Faso
Prof. Gulnar Bekturova	Ministry of Ecology and Natural Resources, Kazakhstan
Dr. Debalkew Berhe	Intergovernmental Authority on Development (IGAD), Djibouti
Mr. Youssef Brahimi	Sahara and Sahel Observatory (OSS), France
Mr. Andrew Campbell	Environment Australia, Australia
Mr. Till Darnhofer	United Nations Environment Programme (UNEP), Kenya
Mr. Peter Gilruth	United Nations Development Programme / Office to Combat Desertification and Drought (UNDP/UNSO), USA
Mr. Dominique Lantieri	Food and Agriculture Organization (FAO), Italy
Mr. Geoff Pickup	CSIRO Land and Water and UNEP Consultant, Australia
Mr. Ricardo Sanchez-Sosa	Chairman, Committee on Science and Development (CST), Cuba
Mr. V.K. Sivakumar	World Meteorological Organization (WMO), Switzerland
Mr. François Tapsoba	Permanent Interstate Committee for Drought Control in the Sahel (CILSS), Burkina Faso

Annex II

SELECTIVE LIST OF DOCUMENTS AND PAPERS BEFORE THE AD HOC PANEL MEETING AND INFORMAL PROCESS MEETING ON BENCHMARKS AND INDICATORS IN GENEVA, 1-3 SEPTEMBER 1998

A. *Selected documents of the Conference of the Parties (COP)*

1. ICCD/COP(1)/CST/3 - Report on ongoing work being done on benchmarks and indicators
2. ICCD/COP(1)/CST/3/Add.1 - Supplementary report on work on benchmarks and indicators
3. ICCD/COP(1)/11/Add.1 (extract) - Decision 22/COP.1 on benchmarks and indicators

B. *Selected documents of the Intergovernmental Negotiating Committee on Desertification (INCD)*

1. A/AC.241/Inf. 4 - Report on ongoing work on benchmarks and indicators

C. *Papers*

1. Technical Proposal on Benchmarks and Impact Indicators (Working Document)
2. Ongoing Work on Benchmarks and Indicators: secretariat
3. Implementation indicators and the methodological approach for impact indicators and evaluation of the CCD: Sahara and Sahel Observatory (OSS)
4. Developing Benchmarks and Indicators, and a Common Approach on Monitoring Desertification in Western Asia: Arab Organization for Agricultural Development (AOAD)
5. Unified Methodology for Assessing and Monitoring Desertification in Latin America: FAO, UNEP, AGRIMED
6. Impact Indicators and Monitoring-Evaluation for Action Programmes to Combat Desertification (Elements for Pragmatic Approach): OSS
7. Evaluation of process of elaboration of PNEDD/National Action Programme of Niger: OSS
8. Indicators and Benchmarks for Measuring Desertification - View from the Thar Desert
9. Report on Beijing meeting of the Ad Hoc Panel
10. Preliminary Proposals of Indicators for Evaluating and Monitoring Desertification Processes in Latin America and the Caribbean

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REPORT ON THE WORK OF OTHER BODIES PERFORMING WORK SIMILAR TO THAT ENVISAGED FOR THE COMMITTEE ON SCIENCE AND TECHNOLOGY

Note by the secretariat

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GE.98-63077

I. INTRODUCTION

1. At its first session, the Conference of the Parties (COP) of the Convention to Combat Desertification (CCD) by decision 21/COP.1 requested the secretariat to consolidate its two previous reports on bodies doing work similar to that envisaged for the Committee on Science and Technology (CST). The reports concerned are contained in documents A/AC.241/67 and ICCD/COP(1)/CST/4.

2. The secretariat was requested to include in the consolidated report supplementary information provided by Governments in accordance with decision 21/COP.1. In all, six relevant additional submissions were received and the present document constitutes the consolidated report, supplemented as requested by the COP.

3. Otherwise the "Directory of Arid Land Research Institutions-1995" published by the Office of Arid Land Studies at Arizona University, the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Environment Programme (UNEP), was pointed to in a previous report as a useful source of information for bodies undertaking work of relevance to the CST.

4. In document A/AC.241/67, one government submission noted that the mechanisms and modalities of potential cooperation between the CST and other bodies needed to be considered by the COP in relation to the CCD.

5. Document A/AC.241/67 also identified possible areas of cooperation derived from the CCD provisions as well as potential methods of cooperation.

II. SCIENTIFIC COMMITTEES AND PANELS

6. The annex to this document contains the main counterparts of the CST from several environmental conventions and organizations closely related to the CCD.

III. INTERNATIONAL ORGANIZATIONS

7. The following international organizations have indicated substantive fields of possible cooperation with the CST over the long term.

(a) *Commonwealth Agricultural Bureaux (C.A.B. International)*: use of relevant database with regard to soils and crops that adapt to arid conditions; disease and health in arid areas, particularly in new crop management systems;

(b) *Food and Agriculture Organization (FAO)*: collection, processing and interpretation of meteorological satellite and weather data in Africa; establishment of norms for monitoring land cover and land-use changes; and enhanced use of fodder trees;

(c) *International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)*: comparability of research activities under the Institute's Desert Margin Initiative (DMI) with action programmes under the Convention; evaluation of traditional and local, soil, water, nutrient, vegetation and livestock management practices; identification of socio-economic constraints to improve management practices; development of improved and integrated management technologies to achieve greater productivity of crops, trees and animals; and facilitation of desertification networking of agencies and bodies;

(d) *International Fund for Agricultural Development (IFAD)*: research and collaborative research networks for resource-poor farmers; promotion of demand-driven technology development and diffusion systems; and establishment of participatory systems for monitoring community-based resource management, as well as small-scale soil and water management;

(e) *Intergovernmental Forum on Forests (IFF), successor to the International Panel on Forests (IPF)*: trade and environment in relation to forest products and services; transfer of technology and the need for financial resources; national forest programmes, underlying knowledge; rehabilitation of forest ecosystems in arid and semi-arid areas; criteria and indicators; and forest assessment;

(f) *International Plant Genetic Resources Institute (IPGRI)*: patterns of genetic diversity in wild forage species; *in situ* conservation in the Sahel region to monitor vegetation change over years; strategies for *in situ* conservation and utilization of plant genetic resources in desert-prone areas of Africa; *in situ* conservation of agricultural biodiversity;

(g) *Organisation for Economic Co-operation and Development (OECD)*: Club du Sahel participation in information exchange among African regional and subregional organizations, as well as in working groups on indicators, impact evaluation and financial aspects; and development, in Africa, of integrated information systems by using new information technologies (in collaboration with OSS and UNITAR);

(h) *Sahara/Sahel Observatory (OSS)*: development of integrated information systems and use of new information technologies in Africa; networking of the Convention's national and subregional focal points in Africa; water and soil conservation, land tenure systems, shared water resources; preparing inventories of national organizations concerned with combating desertification;

(i) *United Nations Conference on Trade and Development (UNCTAD)*: technological capacity-building, technology for integrated dryland management, particularly in the context of the Organizations's role as the secretariat of both the United Nations Economic and Social Council (ECOSOC) and the Commission for Science and Technology for Development (CSTD);

(j) *United Nations Development Programme (UNDP)*: indicator development, including indicators of the implementation process of the Convention's programmes, encompassing methods of assessing the desertification status at the national level; promotion of farmer innovations in water management in the drylands; development of new techniques for drought preparedness and mitigation; understanding of drylands' contribution to national economies as well as linkages between urban development and desertification; and networking between concerned actors;

(k) *United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)*: networking of agencies, bodies and institutions in the context of the Commission's role as the secretariat of the Regional Network of Research and Training Centres on Desertification Control in Asia and the Pacific (DESCONAP);

(l) *United Nations Educational, Scientific and Cultural Organization (UNESCO)*: capacity-building, training and preparation of environmental educational material on desertification and drought issues; work on benchmarks and indicators; environmental monitoring through preparation of inventories of plant and animal species at selected sites using the World Network of Biosphere Reserves and in cooperation with the Diversitas Programme (co-sponsored by UNESCO and ICSU); ethnobotany and traditional knowledge; scientific and technical aspects of portions related to desertification in UNESCO's Man and the Biosphere (MAB) Programme and International Hydrological Programme (IHP); assessment and management of water resources in arid and semi-arid lands; promotion of solar and renewable energy through the World Solar Programme 1996-2005;

(m) *United Nations Environment Programme (UNEP)*: development of desertification assessment methodologies and land-quality indicators; amalgamation of modern and traditional scientific knowledge for sustainable use of dryland resources; networks for exchanging information; assessment of climate change impacts and responses in drylands; and diagnostic studies and research on transboundary water bodies;

(n) *United Nations High Commissioner for Refugees (UNHCR)*: energy supply and energy saving measures in refugee camps in desertified areas;

(o) *United Nations Institute for Training and Research (UNITAR)*: training programmes at the local level on the scientific and technical aspects of the Convention; development, in Africa, of integrated information systems by using new information technologies; and networking of the Convention's national focal points and subregional organizations in Africa;

(p) *World Health Organization (WHO)*: health ramifications of desertification and drought, particularly as they relate to migration and water quality in desertified or dryland areas.

IV. REGIONAL ORGANIZATIONS

8. The following regional organizations have indicated substantive fields of co-operation as follows:

(a) *Arab Centre for the Study of Arid Zones and Drylands (ACSAD)*: databases of water resources, soils, plants, animals and climatology; development of high-yielding, drought-tolerant and disease-resistant wheat and barley varieties; development of gene pools of drought-tolerant fruit trees; establishment of gene banks for the collection of important sheep and goat strains;

(b) *Arab Organization for Agricultural Development (AOAD)*: technologies for increased productivity of rain-fed agriculture in Arab countries; assessment of forestry resources; green belts to combat desertification and desert encroachment in the Arab region; range resources in the Arab region; land and water resource management, land reclamation and water harvesting techniques; natural resource inventories through standardized geo-referenced databases;

(c) *Centre for Environment and Development for the Arab Region and Europe (CEDARE)*: surveys of quality and quantity of freshwater resources; low-cost technology for water conservation; basin-wide joint management of transboundary water resources; feasible technology transfers for soil conservation;

(d) *Concerted Action on Mediterranean Desertification (as reported by one government submission)*: inventorying research programmes on desertification; analyzing work on desertification carried out by different research programmes funded by the European Union;

(e) *Regional Centre for Services in Surveying, Mapping and Remote Sensing (RCSSMRS)*: research, training and provision of information on natural resource and environmental data through the use of techniques such as surveying, mapping, remote sensing and geographic information systems.

V. SUBREGIONAL ORGANIZATIONS

9. In a manner similar to the regional organizations, the following subregional organizations have indicated substantive fields of possible cooperation as follows:

(a) *Agro-Hydro-Meteorological Regional Centre of the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS)*: collection and analysis of biophysical and socio-economic data for the purposes of food security and natural resource management; transfer of meteorological knowledge and know-how to the national level and centres of production;

(b) *Institute of the Sahel (INSAH) of CILSS*: options for developing food security and natural resource management in the Sahel; scientific and technical research in the CILSS subregion; inventorying and evaluating research institutions and organizations in CILSS countries; follow-up indicators for implementation of the Convention; promotion of regional and subregional cooperation in research and development;

(c) *Southern African Development Community (SADC) / Southern African Centre for Cooperation in Agricultural Research and Training (SACCAR)*: sorghum, millet and grain legume improvement; land and water management research; agroforestry research; development of national plant genetic resources management.

VI. NATIONAL ORGANIZATIONS

10. The following countries pointed to their national organizations and information relevant to the CST work:

(a) Egypt:

- *Agricultural Research Centre*: improvement of technologies and services available to farmers; organization, promotion, coordination and review of agricultural research and priorities; as well as planning and development of extension programmes;

- *Alexandria University*: recommendations regarding the collection, analysis and exchange of data and information related to desertification; and recommendations for promoting cooperative and multidisciplinary research work on combating desertification;

- *Cairo University*: raising awareness of the potential threats of drought and desertification; multi-disciplinary research work on desertification; and advice on the institutional structure of national programmes to combat desertification;

- *Desert Research Centre*: directing, collecting, and analysing research work and information on conservation and development of land and water resources;

- *Egyptian Environmental Affairs Agency*: identification and use of adaptable technologies to combat desertification in rain-fed and range lands; assessment and development of traditional knowledge to sustain local area development;

- *National Authority for Remote Sensing*: information on land resources and their potential; monitoring changes in land resources due to different cropping patterns and other uses; and work on early warning signals against drought and sand dune movement;

- *National Water Research Centre*: technical and applied studies on general policies for irrigation and drainage; and assessment of surface and underground water resources for their utilization in an efficient and cost-effective manner;

- *National Research Centre*: promoting research work, particularly in the areas of agricultural technologies and food security; and collecting information, analysing, assessing and reporting on the impact of developments in science and technology in relation to desertification;

- *University of El Zagazig*: monitoring changes in land, water and vegetation resources as related to degradation processes; examination of the social, scientific, technological, and feasibility of research on combating desertification;

(b) Israel:

- *Blaustein Institute for Desert Research of the Ben-Gurion University (BIDR)*: research on water resources in arid environments and their optimal exploitation; use of brackish water and biological remediation of sewage water; desalination of marginal water; desert ecosystem matters such as the physiological adaptation of animals to desert conditions, survival strategies, population ecology, plant ecology, animal plant interaction, animal-plant-environment interaction and the effects of global climate change on biodiversity; social and cultural changes required in life-style and tradition of desert populations in developing countries; climate-conscious architecture for the design of the human habitat in deserts; development of environmentally friendly construction materials characterized by low-energy consuming production processes; regional planning applied to the development of desert communities; work on sustainable intensive production of crops in arid regions; introduction of plant species suitable for cultivation in the desert; agronomic aspects of plant cultivation in arid regions with run-off water irrigation; agriculture on desert dunes and saline water

irrigation; and development of means of livelihood for desert dwellers through animal breeding;

(c) *Japan:*

- *Desertification Subcommittee/the Global Environment Research Planning Committee/Japan's Environment Agency*: managing and controlling research plans on controlling desertification worldwide;

- *Investigation and Examination Committee on Desertification/Land Degradation/Japan's Environment Agency*: inventorying traditional knowledge on desertification to support CST activities;

(d) *Morocco:*

- *Centre for Pastoral Seed Production*: collection, reproduction and distribution of biological material for rehabilitating pastoral land;

- *Engineers' Forestry National School (L'ENFI) of Sale*: promotion of economies in arid and desert zones;

- *National Research Centre on Forestry/Soil Conservation, Water and Forest Administration (AEFCS)*: development and conservation of forestry resources to combat in a general manner ecosystem degradation and in particular land degradation;

- *Royal Institute of Forestry Technicians of Sale*: forestry work including work to combat desertification;

(e) *Norway:*

- *Drylands Coordination Group (DCG) in Norway*: development cooperation in drought-affected countries; improved livelihood security for vulnerable households in drought-prone, marginal areas, especially in Africa; increased food security; sustainable management and use of natural resources, increased access to community-based services such as health, education and clean water; and competence building and institutional strengthening at local and regional levels.

VII. NON-GOVERNMENTAL ORGANIZATIONS

11. The following non-governmental organizations have indicated possible fields of substantive cooperation as follows:

(a) *International Commission on Irrigation and Drainage (ICID)*: control of evaporation from soil and open water surfaces in water harvesting structures; impact of drought on irrigated agriculture; food security and sustainable development in Africa;

(b) *International Council of Scientific Unions (ICSU)*: research on dryland agricultural systems and land management practices;

(c) *International Society of Soil Science (ISSS)*: research, information exchange and indicators on dryland soils in the context of work of the ISSS Commission on Soils and the Environment;

(d) *Institute for Development Anthropology (IDA)*: economic activities of women in pastoral and agropastoral societies in Africa, the Middle East and Central Asia; conventional dam management of floodplain rivers in the dry tropics; forestry in grazing systems;

(e) *Third World Environment and Development (ENDA)*: traditional know-how and practices in rural agroforestry, land administration, and combating land degradation; transfer and promotion of appropriate energy technologies;

(f) *World Conservation Union (IUCN)*: research and information exchange related to conservation and utilization of dryland biodiversity, including in the context of work of the IUCN's Commission on Ecosystem Management;

(g) *World Wide Fund for Nature (WWF)*: information exchange on dryland forests and wetlands in deserts or dryland areas or areas threatened by desertification.

Annex

PROFILES OF RELEVANT SCIENTIFIC AND TECHNICAL BODIES

FRAMEWORK CONVENTION ON CLIMATE CHANGE

NAME OF BODIES/ACRONYM:	Subsidiary Body for Scientific and Technological Advice (SBSTA); Subsidiary Body for Implementation (SBI)
PARENT ORGANIZATION:	Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (FCCC)
LEGAL AUTHORITY:	FCCC, Articles 9 (SBSTA) and 10 (SBI); and relevant decisions of the COP, in particular decision 6/CP.1 and any other relevant work resulting from the adoption of the Kyoto Protocol
PRINCIPAL FUNCTIONS:	SBSTA: (a) provides liaison between scientific assessments and policy needs of the FCCC; (b) provides advice on policy implications of knowledge on climate change and its effects, by reviewing implications of scientific, technical and socio-economic information; (c) prepares guidelines for national communications, and for reporting on activities implemented jointly, including on methodological issues; (d) identifies relevant technologies and advises on promoting their development and/or transfer; (e) advises on scientific programmes, on international cooperation in relevant research and on support for capacity-building in developing countries SBI: considers information based on, *inter alia*, national communications to assess the implementation of commitments and the effect of steps taken by the Parties to reduce or limit greenhouse gas emissions in the atmosphere
POTENTIAL SUBSTANTIVE AREAS OF COOPERATION WITH CST:	Stabilization, within an appropriate time-frame, of greenhouse gas concentrations in the atmosphere that would represent dangerous anthropogenic interference, including emissions from desertification activities; development of indicators of climate change and their significance for desertification, and vice versa; cooperation in areas of technology development, deployment and transfer; cooperation and programmes in areas of scientific research and systematic observation
ROSTER OF EXPERTS:	Yes

CONVENTION ON BIOLOGICAL DIVERSITY

NAME OF BODY/ACRONYM:	Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)
PARENT ORGANIZATION:	Conference of the Parties (COP) of the Convention on Biological Diversity (CBD)
LEGAL AUTHORITY:	CBD, Article 25 and relevant decisions of the COP, in particular decision IV/16* taken at COP 4 held on 4-15 May 1998. Decision IV/16 reviewed the modus operandi of SBSTTA
PRINCIPAL FUNCTIONS:	Provides scientific and technical assessments of the status of biological diversity and effects of types of measures taken under the CBD; identifies relevant innovative, efficient and state-of-the-art technologies and know-how; provides advice on relevant scientific programmes and international cooperation in research and development related to conservation and sustainable use of biological diversity
POTENTIAL SUBSTANTIVE AREAS OF COOPERATION WITH CST:	Conservation and sustainable use of components of biological diversity in drylands; fair and equitable sharing of the benefits resulting from the utilization of dryland genetic resources; development of indicators of biological diversity and their significance for desertification, and vice versa; cooperation in research and development related to conservation and sustainable use of biological diversity in the drylands
ROSTER OF EXPERTS:	Yes (for forest biological diversity and a roster for agro-biodiversity is in preparation)

*Annex II to decision IV/16 specifies the following item for in-depth consideration by SBSTTA at COP 5: dryland, Mediterranean, arid, semi-arid, grassland and savannah ecosystems sustainable use, including tourism and access to genetic resources

GLOBAL ENVIRONMENT FACILITY

NAME OF BODY/ACRONYM:	Scientific and Technical Advisory Panel (STAP)
PARENT ORGANIZATION:	Council of Global Environment Facility (GEF)
LEGAL AUTHORITY:	Instrument for the Establishment of the Restructured GEF
PRINCIPAL FUNCTIONS:	Provides objective, strategic scientific and technical advice on GEF policies, operational strategies and programmes; conducts selective reviews of projects in certain circumstances; interacts in a complementary manner with relevant scientific and technical bodies including potentially with the CST of the Convention to Combat Desertification; advises on the development of scientific and technical criteria, as well as on scientific and technical advice regarding priorities for GEF funding
POTENTIAL SUBSTANTIVE AREAS OF COOPERATION WITH CST:	Interrelations of desertification and drought issues with those of climate change, biological diversity and international waters; choice of indicators to measure project impact in these focal areas as they relate to desertification.
ROSTER OF EXPERTS:	Yes

INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

NAME OF BODY/ACRONYM:	Intergovernmental Panel on Climate Change (IPCC)
PARENT ORGANIZATIONS:	World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP)
LEGAL AUTHORITY:	WMO Executive Council and UNEP Governing Council resolutions and decisions
PRINCIPAL FUNCTIONS:	Assesses on a comprehensive, objective, open and transparent basis, scientific, technical and socio-economic information relevant to understanding the risk of human-induced climate change, its potential impacts and options for adaptation and mitigation
POTENTIAL SUBSTANTIVE AREAS OF COOPERATION WITH CST:	Interrelation of drought and desertification with greenhouse gas emissions and sinks, as well as mitigation of climate change and adaptation to it
ROSTER OF EXPERTS:	Yes

WORLD METEOROLOGICAL ORGANIZATION

NAME OF BODY/ACRONYM:	Hydrology Commission (CHy), Agricultural Meteorology Commission (CAgM), Climatology Commission (CCL)
PARENT ORGANIZATION:	World Meteorological Congress
LEGAL AUTHORITY:	World Meteorological Convention
PRINCIPAL FUNCTIONS:	CHy does studies on water balance, hydrology assessments, global hydrological cycle and hydrological forecasting; CAgM develops agrometeorological services, including meteorological aspects of desertification and drought; CCL studies climate and its effect on human activities and application of meteorological information for sustainable development
POTENTIAL SUBSTANTIVE AREAS OF COOPERATION WITH CST:	Studies of water balance; assessments of the global hydrological cycle and hydrological forecasting; development of agrometeorological services; drought preparedness and management including contingency plans; use of agrometeorological data in food security systems; capacity-building for assessment and systematic observation of meteorological data; promotion of use of meteorological data and information for preventive measures to avoid land degradation; transfer of knowledge and technology via training on drought management and desertification; research and development on causes and effects of drought and desertification
ROSTER OF EXPERTS:	Yes

RAMSAR CONVENTION

NAME OF BODY/ACRONYM:	Scientific and Technical Review Panel (STRP)
PARENT ORGANIZATION:	Conference of the Parties (COP) to the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Convention on Wetlands, Ramsar Convention)
LEGAL AUTHORITY:	Ramsar Convention; COP 5, resolution C.5.5 and COP 6, resolution VI.7
PRINCIPAL FUNCTIONS:	Provides scientific and technical assistance to the Bureau and Standing Committee and, through them, to the COP (Tasks are entrusted on an annual basis and include: identification of priorities for the application of monitoring procedures and evaluation of the application of guidelines for the implementation of the "wise use" concept; evaluation of the application of the "Guidelines on management planning for Ramsar sites"; definition of ecological character and guidelines on monitoring change in it)
POTENTIAL SUBSTANTIVE AREAS OF COOPERATION WITH CST:	Wetlands in drylands management planning taking into account Ramsar Strategic Plan for 1997-2002
ROSTER OF EXPERTS:	Yes

BONN CONVENTION

NAME OF BODY/ACRONYM:	Scientific Council
PARENT ORGANIZATION:	Conference of the Parties (COP) to the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention, "CMS")
LEGAL AUTHORITY:	Bonn Convention, Article VIII, COP IV, resolution 4.5
PRINCIPAL FUNCTIONS:	Provides overall advice on scientific matters to COP and joint agreed activities
POTENTIAL SUBSTANTIVE AREAS OF COOPERATION WITH THE CST:	Specific conservation and management measures for migratory species in dryland areas through, for example, an agreement on Sahel-Saharan ungulates; selection and monitoring of small-scale pilot projects to promote implementation in areas of interest to both CMS and the Convention; coordination of research on migratory species to ascertain the conservation status of migratory species in drylands
ROSTER OF EXPERTS:	The COP appoints experts to meetings of the Scientific Council

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SYNOPSIS OF REPORTS ON TRADITIONAL KNOWLEDGE

Note by the secretariat

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GE.98-63980 (E)

I. INTRODUCTION

1. In its decision 20/COP.1, adopted at its first session, the Conference of Parties, noting the report of the Permanent Secretariat of the Convention contained in ICCD/COP(1)/CST/5 on modalities and timing of the work of the Committee on Science and Technology on inventories of research and traditional knowledge, and research priorities:

(a) Encouraged Parties and observers to collate information they had in respect of the use of traditional and local technology, knowledge, know-how and practices and to provide reports not exceeding five pages in length on that topic to the Permanent Secretariat no later than 31 December 1997, and

(b) Requested the Permanent Secretariat to prepare a synopsis of such reports for consideration by the Committee on Science and Technology at its second session.

2. That synopsis appears below.

II. CONTRIBUTIONS FROM PARTIES AND OBSERVERS CONCERNING TRADITIONAL KNOWLEDGE

3. The Permanent Secretariat received reports from 12 Parties and 5 observers. These concern a very wide range of traditional and local knowledge, know-how and practices stemming in many instances from experience handed down from generation to generation and responsive to social and cultural change and the local environment.

4. The reports revealed the use of a variety of techniques and can be classified by topic as follows: control of wind or water erosion; water conservation; improvement of soil fertility; plant protection; forestry; social structures; housing architecture. They are summarized below.

4.1 Control of wind or water erosion

(a) Windbreaks: creation around plots of barriers comprising trees or, in some instances, non-living material;

(b) Erection at right angles to the prevailing wind of obstacles (walls, banks, fences) made of stone, earth or vegetable matter (tree branches or palm fronds). These structures, the height of which is periodically increased, cause sand to accumulate; the sand can then be stabilized by covering it with branches or earth. The operation can be continued by planting species with an extensive root system or by biological fixing of the dunes;

(c) Erection of obstacles at an angle to the wind so as to force it to change direction: this leads to deviation of the sand, which therefore ceases to accumulate;

(d) Placing of large stones on the tops of dunes: this accelerates the wind around the stones, so increasing the lifting force on the sand, which is then carried further away;

(e) Spreading of water on land after ploughing: this stabilizes the fertile components of the soil by increasing soil cohesion;

(f) Building cultivated terraces separated from each other by low stone walls running along the contour lines. The distance between the walls depends on local conditions (rainfall amount, distribution and rate, geology, soil, crop types, etc.). Associated with the terraces are ditches to channel the excess water to gullies serving as natural outlets for it;

(g) In gullies: fixing in place of flat dry stones together with logs and large branches. A simple planting scheme will help to reduce the water velocity;

(h) Use of vegetation to control erosion: the species used are chosen for their rapid growth, high density and well-developed root system.

4.2 Water conservation project

(a) Construction of ponds, pools and lagoons to collect water during the rainy season for irrigating crops and watering livestock. The structures are made using local materials;

(b) Construction of impoundments on small water courses;

(c) Controlled flooding: a very old technique for conserving water and the soil which is well-suited to desert environments. During the heavy rains, part of the precipitation is absorbed by the ground and some (the proportion varies with the intensity of the precipitation and the characteristics of the soil) runs over the ground surface towards lower-lying areas. This runoff can be directed onto walled plots where its impoundment between the walls promotes infiltration. The land can then be cropped, with good yields. The critical question with this technique is whether the degree of infiltration is adequate for the intended crops;

(d) Cultivation of large areas in order to reduce soil evaporation;

(e) Greenhouse farming with water management;

(f) Construction of watertight clay or tile drains and irrigation channels in order to reduce evaporation;

(g) Construction of "qanats", underground dykes and tunnels for the transfer of subsurface water to the surface by gravity (for agriculture or consumption);

(h) Construction of multi-level "qanats": channels at various depths;

(i) Construction of impoundments for artificial recharge of "qanats";

(j) Use of clay jars for irrigation;

(k) Use of textiles to keep garden soil moist;

(l) Irrigation of hillside terraces by means of channels built by the farmers along the inner edge of each terrace. The water runs along these contour-line channels from the highest to the lowest terrace;

(m) Collection of water on house tops, etc. (installation of tanks) for consumption in the desert or other areas with an inadequate water supply;

(n) Rice-growing based on the use of surface water in the rainy season: berms some 1.5 m high are built to prevent flooding and retain the water.

4.3 Improvement of soil fertility

(a) Use of natural fertilizer: animal or human excrement and decayed plant waste;

(b) In situ manuring: livestock is brought directly onto fields to graze and deposit dung there;

(c) Production and use of compost from plant and household waste. The composting process can be speeded up by the addition of microorganisms;

(d) Production and use of a mixture of animal dung, urine, forest litter and household and agricultural waste, including ash from cooking fires;

(e) Maintenance of soil fertility by green manuring, the manure coming either from natural vegetation or from crops intended for ploughing in;

(f) Use of nitrogen-fixing plants;

(g) Mixing of forest litter directly into the soil;

(h) Mixing of animal carcasses into the soil;

(i) Spreading on the ground, in order to increase soil permeability, of sugar cane ash obtained from sugar refineries;

(j) Spreading of liquid sugar-industry waste. This is suitable for any soil capable of growing sugar cane, but it is also very effective on compacted, saline or eroded soils. It increases both the content of organic matter, especially nitrogen and carbon (a humic substance), thereby improving soil stability, and the bacterial biomass;

(k) Liming to prevent soil erosion and reduce evaporation;

(l) Application of clay (loam) as a mulch to protect the ground surface;

(m) Use of gravel to reduce the risk of soil erosion;

(n) Improvement of the texture of heavy soils by adding sand;

(o) Crop rotation to ensure better management of soil fertility and moisture;

(p) Fallowing in order to maintain soil fertility;

(q) Careful choice of soil-preparation techniques;

(r) Use of multi-bottom ploughs and animal draught power to minimize tillage (for soil preparation and to facilitate crop-growing without inverting soil profiles);

(s) Appropriate soil management: the best example is considered to be the method used by the Jyapu, a Newar community in the Kathmandu valley. Jyapu farmers rarely use livestock, preferring to till the soil with hand tools such as hoes. As manure they use black shale, compost and human nightsoil;

(t) Soil conservation: the traditional "zai" technique employed in Burkina Faso is an intensive technique involving manure management and water-saving. It consists in digging holes in the ground and filling them with manure during the dry season. This attracts termites, which digest the manure; the latter is then more easily taken up by roots and increases soil porosity. Seeds are sown in the holes. This highly efficient technique enables communities with very limited resources to regenerate even badly degraded soil. When not being used for growing, the holes can provide water storage space.

4.4 Plant protection

(a) Preservation of the natural vegetation: choosing of species to suit micro-climatic conditions; growing of drought- and heat-resistant species; growing of salt-resistant species;

(b) Prohibition of grazing: preservation and protection of areas of rangeland, especially in depressions rich in alluvial deposits and forage plants;

(c) Harvesting of spontaneous fodder and burning of land to promote re-growth;

(d) Irrigation of crops in winter to control frost;

(e) Use of birds (e.g., starlings) to control insects (e.g. crickets);

(f) Harvesting outside full-moon periods in order to minimize insect infestation;

(g) Application of ash to plants;

(h) Application of dilute urine to plants and seeds in order to clean them and give them some protection against disease and insects;

(i) Use of common, usually stronger species of plant.

4.5 Forestry

(a) Creation of forests using local species of trees and bushes and planting of fodder trees and bushes;

(b) Creation of nurseries for reforestation and desert pastureland; development of orchards and reforestation in the desert;

(c) Simultaneous planting of sorghum or millet seeds and saplings. The cereals are cut to a height of 50 cm or more so as to protect the saplings, which then benefit from the soil moisture and manure. The high cutting also promotes natural regeneration of all sorts of species, ensuring considerable genetic diversity;

(d) Growing of coffee together with forest species known for providing beneficial shade. Use of the same system to grow cocoa;

(e) Use of clearings for small-plot growing of a variety of vegetables in forests.

4.6 Social structures

(a) There are three types of lifestyle: nomadic, semi-nomadic and sedentary. The distances covered by the population groups who practise them vary widely, entailing differences in management and type of livestock farming and, in the case of semi-nomads and nomads, the presence or otherwise of irrigated agriculture on rivers or lakes. Nomadic herders use their pastureland in a seasonal pattern (transhumance), moving their animals from one zone to another depending on the availability of water and grass. This provides protection against weather risks and prevents the degradation of vegetation;

(b) "Motselo" (in Botswana, a form of cooperative and bank involving 5-15 not-necessarily-related people (men and women)). Membership of such a group is voluntary and lasts until the end of the loan and borrowing cycle. Each person puts in an agreed sum of money or quantity of seeds or an equivalent amount of work, all of which is then used as well as possible in the light of local knowledge in order to increase the group's monetary wealth. The types of activities supported may include cooking or the brewing and sale of local beer. The cash contributions are used to purchase requisites such as sugar or cooking or brewing equipment, etc. Labour expended in production or marketing is also considered as a capital contribution. All the income is allotted in turn to the members of the "motselo", who then use the money to develop their farms by purchasing equipment or to meet social needs (family celebrations, burial ceremonies, etc.).

The advantages are:

- the structure is simple;
- the funds are turned over rapidly;
- investment is simple and free from conditions, so everyone can afford it;

- the funds and profits go directly to the members;

- very poor people can take part by contributing labour;

(c) Water resources management by local communities or farmers' committees. Their skills and knowledge are passed on from one generation to the next, ensuring that water resources are soundly managed;

(d) Pastureland protection and access control by a community organization that defines rights and roles and enforces sanctions (in connection with pasture management). Knowledge, however, varies from group to group and region to region and depends on local conditions, the responses to particular problems and the given group's geographical or social isolation. In Nepal, pastureland is managed in accordance with religious beliefs;

(e) Management and control by the local population of access to forest resources;

(f) Development through agriculture of unused floodplains: this can, as in the case of Niger, stabilize the population by increasing food availability. It also introduces a new form of agriculture: the partial replacement of millet, the staple foodstuff, by rice can help to reduce excessive cultivation of millet and prevent desertification;

(g) Use of waste products - from coffee-farming, sugar-refining or sunflower-oil production - as animal feed;

(h) Promotion of *Vigna* (several varieties) for human and animal consumption: high protein value. The residual matter can be used as green manure;

(i) Storage of cereals and seeds in kitchens, where the carbon monoxide and carbon dioxide prevents their becoming infested with insects.

4.7 Architecture and energies

(a) Protection of structures (houses, equipment sheds, stables, etc.) by siting them outside natural-disaster (flood, storm, etc.) hazard zones;

(b) Building of chimneys in houses to improve ventilation and thereby reduce summer temperatures;

(c) Inclusion in buildings of arches, domes and high ceilings to keep down temperatures;

(d) Insulation of walls with clay or straw to keep out heat or cold;

(e) Construction of basements for their cooling and food-conservation capabilities;

(f) Construction of ice pits in mountainous areas and around towns so as to be able to build up stocks of ice for the summer;

(g) Making of hinged doors and windows and wooden venetian blinds to shield against solar radiation;

(h) Building of dovecotes with a view to using the birds' droppings as a manure supplement;

(i) Building in villages of artificial drainage systems so as to retain some moisture in dry areas;

(j) Use of windmills and water mills; use of solar energy;

(k) Use of briquetted sugar-industry waste as a household energy source (residual crop matter is dried and briquetted);

(l) Use of rice straw as fuel;

(m) Construction using maize or millet stalks, wheat straw, weeds and other waste. This contributes towards keeping villages clean and limiting numbers of rodents and insects.

III. CONCLUSION

5. The reports received by the secretariat differ in origin and content. Some are very detailed, with lengthy explanations; others are very brief and others still address only organizational issues, without commenting on farming techniques. Many reports contain no information or comments either on the overall role of traditional and local technology or on how such technology might be linked to its modern counterpart. Nor is there always information on the participation of non-governmental and community-based organizations in the gathering of information related to, or the application of traditional and local technology, knowledge, know-how and practices.

6. Bearing in mind the relevant articles of the Convention, the Conference of the Parties might wish to consider recommendations and comments by the Committee on Science and Technology concerning the collation of Parties' and observers' information on traditional and local technology, knowledge, know how and practices, including guidelines for the Permanent Secretariat on the activity to be undertaken in that connection.